Class Code: 2036
Revised: 8-16-10

CIVIL ENGINEERING AIDE SPECIALIST I

PURPOSE AND NATURE OF WORK

Positions in this class perform non-routine technical work on civil engineering projects, with responsibility for applying theory and principles of civil engineering toward projects such as compiling/computing a variety of engineering data, analyzing data and preparing reports, and/or developing/preparing/making recommendations regarding schematics, designs, specifications, parts lists, etc. Work involves solving problems that are not easy to identify but are similar to those seen before. Solving these problems requires judgment such as setting priorities, evaluating results, or coordinating with others. Solutions can often be found by using methods chosen before in similar situations. Independent judgment is required to indentify, select, and apply the more appropriate of available guidelines and procedures, interpret precedents, and adopt standard methods or practices to meet variations in facts and/or conditions. Work is performed under the supervision of a Professional Engineer, either directly or through a Civil Engineering Aide Specialist II, who will convey objectives, give technical advice, and review project/solution before it is accepted. Nature of the work is not supervisory; however, incumbents may be assisted by lower level technicians.

ILLUSTRATIVE EXAMPLES OF WORK **(Note: These examples are intended only to illustrate the various types of work performed by incumbents in this class. All of the duties performed by any one incumbent may not be listed, nor does any incumbent necessarily perform all of these duties.)**

Performs tasks related to the construction of in-house projects, such providing information on construction material, analyzing construction plans in the field for feasibility, directing a survey crew, and/or maintaining specifications and files related to civil engineering projects.

Drafts dimensional drawings and design layouts for projects and ensures conformance to standards. Involves converting survey data in a computer aided design (CAD) program to produce the set of plans, creating profiles and cross sections, and merging these to create a set of construction documents. Creates maps from geographic information system (GIS) database for construction projects. Updates and adds layers to GIS database as required.

Reviews preliminary plans submitted for construction and comment on adherence to LCG standards. Will inform the developer's engineer of problems or will approve as is. After approval, performs periodic inspections of projects while under construction and document activities. When the project is completed, performs a final inspection to ensure all conditions are met and plan followed and will recommend issuance of a Certificate of Occupancy.

Investigates public complaints regarding drainage problems to diagnose problem, i.e. reviewing approved drainage plans for the area to ensure that it is in compliance. Sends letters to responsible parties, should the complaint be determined valid.

Runs water flow modeling computer programs to project the needs of the water and/or wastewater system. Incumbent inputs data into the modeling program, conducts flow meter studies, and edits GIS maps with respect to as-builts.

Serves as project coordinator, which involves preparing bid documents for civil engineering projects, approving pay applications as construction conditions are met, meeting with consultants/contractors to discuss project status or other engineering concerns, approving change orders.

Performs related work as required.

NECESSARY KNOWLEDGES, ABILITIES, AND SKILLS (depending on area of assignment)

Knowledge of civil engineering principles and practices and ability to independently apply those principles and practices towards accomplishing tasks.

Knowledge of and ability to perform mathematical operations specifically related to engineering.

Knowledge of construction techniques and practices.

Knowledge of related building regulations and codes.

Knowledge of and ability to use computer systems and software appropriate to the nature and level of work.

Ability to communicate effectively by telephone, in person, or in writing to both individuals and small groups.

Ability to produce, read, analyze, and comprehend job-related specifications, plans, and/or drawings.

Ability to inspect, investigate, and recommend courses of action related to the position.

Ability to independently solve engineering related problems related to area of assignment.

Ability to work independently to accomplish tasks.

DESIRED EDUCATION AND EXPERIENCE

Associate's Degree or completion of a technical specialty program of eighteen months – three years duration in civil engineering technology (or closely related field) and significant prior working experience in the civil engineering field incorporating the necessary knowledge, skills, and abilities required for the specific position.